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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/604,407 | 07/18/2003 | Jin-Sheng Gong | REAP0017USA | 1406 |
| 27765 | 7590 | 03/22/2006 | EXAMINER | |
| NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116 | | | WU, XIAO MIN | |
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DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/604,407 | Applicant(s) GONG ET AL. | |
| | Examiner XIAO M. WU | Art Unit 2674 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loveridge et al. (US Patent No. 6,545,688) in view of Mckay et al. (US Patent No. 6,313,822).

As to claim 1, Loveridge discloses a method of frame synchronization for converting a source frame signal (101, Fig. 1A) to a destination frame signal (148, Fig. 1A), wherein the source frame signal is received at a first frame rate (e.g. the source frame rate is F), the destination frame signal includes a plurality of horizontal lines and each of the horizontal lines includes a plurality of pixel data (see col. 6, lines 33-34), the method comprising the following steps: outputting the destination frame signal according to the source frame signal (e.g. F, see col.6, lines 25-64), wherein the destination frame signal is output at a second frame rate; and

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adjusting the number of the pixel data of at least one of the horizontal lines (e.g. scaling in horizontal direction, see col. 7, lines 26-35) such that the first frame rate and the second frame rate are substantially the same (see 270, Fig. 2 and col. 6, lines 65-67).

It is noted that Loveridge does not disclose the newly added limitation of “at least two horizontal lines of the designation signal have a different number of pixel data” as recited in the claim. McKay is cited to teach modifying display screen similar to Loveridge. As shown in Fig. 10, different scanning lines have a different number of pixel data (e.g. 1280 pixels or 768 pixels). It would have been obvious to one of ordinary skill in the art to have modified Loveridge with the features of the at least two horizontal lines having a different number of pixel data as taught by McKay because McKay provides that one screen can display combination of both the zoomed motion video and the video signal from computer system (see col. 14, lines 24-26).

As to claims 2, 10, Loveridge discloses that the resolution of the source frame signal and the resolution of the destination frame signal are different (see 260, 270, Fig. 2).

As to claims 6, 15, Loveridge discloses that the step of adjusting the number of the pixel data is executed by increasing the number of the pixel data to prevent underflow or by decreasing the number of the pixel data to prevent overflow (e.g. the scale circuit can resize the image by adjusting either vertical or horizontal lines, see col. 7, lines 26-44).

As to claims 7, 16, Loveridge discloses that adjusting the number of the pixel data is executed by increasing the number of the pixel data when the second frame rate is faster than the first frame rate or by decreasing the number of the pixel data when the second frame rate is slower than the first frame rate (see the equations (1) to (6) as shown in col. 6).

As to claims 8, 17, 20, Loveridge discloses the horizontal lines further include a last horizontal line defined by a last horizontal sync signal and a vertical sync signal, the method further comprising the following step: adjusting the number of the pixel data of the last horizontal line according to the last horizontal sync signal and the vertical sync signal (see Fig. 3 and col. 9, lines 17-63).

As to claims 9, 18, Loveridge discloses an apparatus for converting a source frame signal (101, Fig. 1A) to a destination frame signal (148, Fig. 1A), wherein the source frame signal is received at a first frame rate (e.g. F) and the destination frame signal is output at a second frame rate, the destination frame signal includes a plurality of horizontal lines, each of the horizontal lines includes a plurality of pixel data (see col. 6, lines 33-34), the apparatus comprising: a buffer (120, Fig. 1B) for storing at least a part of the pixel data; and a converter (140, Fig. 1A) for adjusting the number of the pixel data of at least one of the horizontal lines such that the first frame rate and the second frame rate are substantially the same (see 260, 270, Fig. 2).

It is noted that Loveridge does not disclose the newly added limitation of “at least two horizontal lines of the designation signal have a different number of pixel data” as recited in the claim. McKay is cited to teach modifying display screen similar to Loveridge. As shown in Fig. 10, different scanning lines have a different number of pixel data (e.g. 1280 pixels or 768 pixels). It would have been obvious to one of ordinary skill in the art to have modified Loveridge with the features of the at least two horizontal lines having a different number of pixel data as taught by McKay because McKay provides that one screen can display combination of both the zoomed motion video and the video signal from computer system (see col. 14, lines 24-26).

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As to claim 11, Loveridge discloses the memory 120 for storing pixel data. It is well known in the art to have different size of the memory for storing pixel data such as using a line buffer for storing data for one horizontal line,

As to claims 3-5, 12-14, 19, It is noted that Loveridge does not discloses the pixel data of each of the horizontal lines further includes a plurality of pixel signals and a plurality of porch signals and when adjusting the number of the pixel data, the number of the porch signals is adjusted. However, using a plurality of porch signal (e.g. front porch and back porch signals) for adjusting the number of the pixels of the horizontal line is well known in the art such as taught by McKay (see col. 3, lines 26-31). It would have been obvious to one of ordinary skill in the art to have modified Loveridge with the features of using porch signals for controlling the pixel number as taught by McKay so that the size of the image can be controlled.

Allowable Subject Matter

1. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

2. Applicant's arguments filed 1/4/2006 have been fully considered but they are not persuasive.

Applicant argues that Loveridge does not disclose the newly added limitation of "at least two horizontal lines of the designation signal have a different number of pixel data" as recited in independent claims. These arguments are not persuasive because the reference to McKay clearly teaches these limitation as shown in Fig. 10. See the new discussion of McKay above. It is

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believed that the broadly claimed structured are still met by the combination of Loveridge and McKay.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAO M. WU whose telephone number is 571-272-7691. The examiner can normally be reached on 6:30 am to 4:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

X.W.
March 17, 2006



XIAO M. WU
Primary Examiner
Art Unit 2674